DOCUMENT RESUME

ED 101 908 RC 008 344

AUTHOR	Ford, Phyllis M.; And Others
TITLE	Resident Sites for Outdoor Education.
INSTITUTION	Oregon Univ., Eugene. Center of Leisure Studies.
PUB DATE	74
NOTE	54p.
AVAILABLE FROM	Center of Leisure Studies, 1587 Agate Street, Eugene, Oregon 97403 ($2.00)
EDRS PRICE	MF-$0.76 HC-$3.32 PLUS POSTAGE
DESCRIPTORS	Buildings; *Elementary Secondary Education; Equipment; Facility Guidelines; *Literature Reviews; Maintenance; *Outdoor Education; *Resource Guides; Site Analysis; *Site Selection; Surveys
IDENTIFIERS	Oregon; *Resident Places Survey

ABSTRACT

In an attempt to develop a set of recommendations for resident outdoor education sites for Oregon, this guide reviews relevant literature, surveys and analyzes existing sites, and presents recommendations. The literature survey focuses on site size and ownership; distance from schools; season of use; capacity; natural attributes; living accommodations, maintenance and storage, administration area, indoor and outdoor educational areas and facilities. Questionnaires completed by 45 directors of resident outdoor education sites are analyzed in terms of the five categories surveyed (General, Natural Attributes, Indoor Areas/Facilities, Outdoor Areas/Facilities, and Equipment/Supplies). Recommendations state that a site should: operate 12 months a year; accommodate 100 to 200 participants, plus staff; be developed for flexible use by both sexes of all ages and accommodate those who are handicapped; consist of a minimum of 1.5 acres per person with a variety of topographical features; be located within a 15 to 20 mile distance from a hospital; have one or more types of water resources; have winterized quarters; and provide toilets, showers, a heated dining hall, an infirmary, laundry facilities, administration building, a director's and caretaker's residence, maintenance and storage buildings, nurse's quarters, and guest facilities. (JC)

ED101908

U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Center for Leisure Studies

RESIDENT SITES FOR OUTDOOR EDUCATION

by

Phyllis M. Ford
Angela R. Dreher
Kathryn C. Crandall

Department of Recreation and Park Management
University of Oregon
Eugene, Oregon

RC 008 344

Copyright 1974
This material is fully protected by copyright and nothing that appears in it may be reprinted or reproduced in any manner, either wholly or in part, for any use whatever without special written permission of the copyright owner

BEST COPY AVAILABLE

This publication produced and distributed through the CENTER OF LEISURE STUDIES, 1587 Agate Street, Eugene, Oregon 97403. $2.00
Typed by Ms. Wally Tharp

TABLE OF CONTENTS

PART I - INTRODUCTION. 1

PART II - LITERATURE RELEVANT TO RESIDENT OUTDOOR EDUCATION SITES. 3

Site Ownership 3
Site Size. 4
Distance from Schools. 5
Season of Use. 5
Camp Site Capacity 6
Natural Attributes 7
Living Accommodations. 12
Maintenance and Storage. 15
Administration Area. 16
Indoor Educational Areas 17
Outdoor Educational Areas and Facilities 18
Summary of the Literature. 21

PART III - SURVEY OF EXISTING OUTDOOR EDUCATION RESIDENT SITES. 23

Category I: General 24
Category II: Natural Attributes 25
Category III: Indoor Areas/Facilities 27
Category IV: Outdoor Areas/Facilities 29
Category V: Equipment/Supplies. 30
Discussion of Results: Interpretation 31

PART IV - RECOMMENDATIONS. 33

BIBLIOGRAPHY 36

APPENDIX A 38

APPENDIX B 41

APPENDIX C 43

APPENDIX D 45

APPENDIX E 48

PART I

INTRODUCTION

When a school district builds a school, an auditorium or a cafeteria, it can draw upon the expertise of school architects and building laws. When a youth agency, church organization or private enterprise develops a youth camp, it may seek guidance from standards tested and verified by the American Camping Association. When, however, a school district or any educational division develops, rents, or purchases a camp site for resident outdoor education programs, there is virtually no place to turn for advice, recommendations or prototypes.

In the United States, there are no federal statutes which relate to organized youth camps (primarily vacation sites sponsored by public agency or private groups). There are, in fact, relatively few states with many regulations for youth camps, several states with a few regulations and some states with no regulations concerning the areas and facilities for such programs. Most school districts offering resident outdoor education programs use the sites established for summer camping programs and there are no federal and only a few isolated state facility regulations for school programs at resident sites. The American Camping Association has published a brochure giving recommendations to camp directors for adapting their sites for resident outdoor education programs, but nowhere is there anything to help an enterprise develop a site the primary purpose of which is for use as an environmental education center.

The Environmental Education Division of the Oregon State Board of Education has shown interest in locating a site which could be used as a demonstration area for resident environmental education programs. Since no material or local materials existed for establishing such a site, it was felt that a set of recommendations might be established from a review of literature discussing such sites plus a review of facilities currently found on existing sites.

In an attempt to develop a set of recommendations for resident outdoor education sites for the State of Oregon, a study was conducted in January, February and March, 1974 by personnel from the Department of Recreation and Park Management of the University of Oregon. All available literature germane to outdoor education resident sites was studied, analyzed and synthesized, and a five-part questionnaire was developed and sent to seventy directors of resident outdoor education sites listed in the Directory of Environmental Education Facilities prepared by the National Audubon Society.

This paper consists of the review of relevant literature, analysis of survey instruments and recommendations for resident outdoor education areas and facilities.

For the purpose of this paper, the following definitions were used:

Resident - lasting five or more days including eating and sleeping.

Outdoor education - a program sponsored by public, private or parochial schools to enhance the educational process by teaching about the out-of-doors in an outdoor setting (i.e. youth camp).

Site - areas and facilities used by public, private or parochial schools for conducting outdoor education programs.

0007

PART II

LITERATURE RELEVANT TO RESIDENT OUTDOOR EDUCATION SITES

Books, articles, dissertations and miscellaneous papers were studied to glean facts, opinions and recommendations for resident sites.

Findings from the literature concerning natural attributes desirable for environmental and conservation education include reports of existing program curricula in environmental education of public schools, the natural attributes that characterize sites used by schools, recommended natural features for environmental study and desirable natural features in relation to health, safety, and maintenance.

The following is a synopsis of the relevant findings.

Site Ownership

The findings from a 1969 nationwide survey of programs in environmental education in operation in public schools enrolling over 1,000 pupils show that resident sites used by the public school systems are most often leased, chiefly from private organizations, such as the YMCA or the Boy Scouts, from state government, or from private camps. Results show that purchase is unquestionably the major means of acquiring resident facilities that are owned by the school systems. Most sites not owned or leased by school systems are public rather than private property. These sites include public parks, institutions, recreational areas, and other public facilities used in environmental education programs. For the typical college-university center, the acreage is a gift. (22, 18, 17)

Site Size

An advisory committee for the American Camping Association has suggested that under average circumstances, there should be at least one acre per camper for land used during the summer months. If the camp is surrounded by developed land, extra acreage must be allowed to provide a buffer zone of natural vegetation between the program areas and the land adjoining the camp. Guides for Girl Scout camps state that at least one acre per camper should be considered. Current research recommends for the ideal outdoor education center, a minimum of one acre per camper for year-round use if that center borders on private or government lands. Otherwise three to four acres per camper should be considered to provide a greater diversity of natural resources. Current directors strongly recommend more acreage. (1, 19, 23, 15, 18)

The typical public school system, in terms of medians, uses one site with resident facilities of 200 acres. More than one fourth of responding systems use sites with resident facilities consisting of 500 acres or more. Acreage of sites with resident facilities used by large systems (25,000 and above) tends to be either between 100-200 acres or 500 and more. For medium-sized systems a site with resident facilities of 200 acres or more was reported as median; for small systems, a site with resident facilities of 123 acres is used. The typical college-university center encompasses 325 acres but, where combined with adjacent acreage available for use, 1,000 acres were used. For a nature center, a minimum of 50 acres is required with 200-300 acres representing an average center and 2,000-3,000 acres more appropriate and most satisfactory. (19, 22, 18, 20)

Distance from Schools

Professionals contend there are advantages in being within fifteen to thirty miles of the school because of ease in transportation and the potential for a broad use of facilities for many educational activities. However, the quality of the program area should not be sacrificed, since modern transportation makes more remote facilities available. Suggested guidelines for sites used by schools in Oregon include that the site be located within a radius of 75 miles of the school. The American Camping Association recommends a 75 mile distance or a 1 1/2 hour drive. Over three-fourths of the sites with resident facilities used by the public schools included in a nationwide survey were located within 100 miles of the school. Based on averages of ten major college-university centers, the typical center is located less than 25 miles from the heart of campus. A four to five hour drive maximum for college-university programs is recommended by Pick for the ideal outdoor education center. (24, 11, 18, 17, 25)

Season of Use

The typical college-university center remains in full-time operation for ten months out of the year, although, year round operation is recommended for this type of center.

In a survey of public school systems, one-fifth of the reporting schools indicated that their programs operated only during one season during the school year. These programs include those in the immediate school environs, day, and overnight use centers. The times of the year

at which programs operate is clearly related to the grade level of the programs. Combined programs, those that include both one or more of the elementary grades and some one or more grades seven through twelve or to adults, have the most extensive operation with the largest proportion operating only during one season within the school year.

Large systems have programs with more extensive operation than medium or small systems. A much larger percentage of programs in large than in medium or small systems operate year-round. Percentage of programs that operate during only one season within the school year is much higher in medium and small systems than in large systems. (17, 18)

Camp Site Capacity

Capacity of the resident camp or facility will be influenced by the size of the dining hall, the total acreage of the camp and length of use. The typical college-university outdoor education center houses 150 in winterized facilities including eight full-time staff. Additional housing for summer use is available. Suggested guidelines for Oregon schools using resident sites suggest a resident camp for year-round use that accommodates 60-120 students and supervisory staff. George Donaldson supports an ideal maximum capacity of forty for the camp which hopes to exploit to the full its unique educational potential. (6, 9, 17)

The readings suggest that the school camp serve a wide age range. An ideal college-university outdoor education center would serve all ages, both sexes and various types of groups. (17, 19)

0011

In the survey of public school systems, the use of resident sites varies with the grade levels of the programs. Since junior-senior high programs tend to have a more formal academic approach, a much smaller proportion of them than of elementary or combined programs use resident sites and the percentage of elementary programs using sites is higher. A comparatively large proportion of elementary programs offer on-site resident experiences only. (17)

Natural Attributes

The primary purpose of many programs offered by the public school systems included in the NEA 1970 nation-wide survey is to stimulate the interest of pupils in, and provide them with opportunities to enjoy the ourdoors rather than to study the interrelation of man to his environment. This helps to explain why cultural sites and sites appropriate to the study of urban ecology are not widely used and also why some of the institutions for the preservation and utilization of nature are less widely used than natural sites or sites designed for the appreciation of the outdoors. Most of the programs in environmental education offered by public schools (including the school environ, day and resident sites) have a scientific orientation. In considering the separate categories, the environmental sciences deserve special attention because of the inclusion of most of them in a majority of programs. These fall into three groups -- top range comprises biology, ecology, insect study, geology, botany, general science and weather, all of which are found in a substantial majority of programs. Limnology, zoology, and astronomy

0012

make up a middle group and are included in a large proportion of programs; marine biology, marine zoology and oceanography are the sciences least frequently used in programs.

In this study, geographic factors influenced the types of sites (not owned or leased) for environmental education. Among the programs in the West, eighty percent used sites with forests. The Northeast makes particularly extensive use of woodlands, ponds or reservoirs and the middle section of the country surpasses other regions in the percentage of programs whose sites are characterized by lakes. Less than thirty percent of programs in either the east or west utilize sites on the ocean. (17)

Based on a survey of 101 colleges and university outdoor education centers, the typical center, based on averages, contained a dammed river and an artificial lake. (18)

The National Audubon Society has defined the goals of a nature center. These goals include a natural area where students may study physical features and native flora and fauna and where the ecology of the natural community can be studied. The center embraces several areas of land; an extensive educational use area, a special small scale conservation farm or ranch, a natural resources management area where good conservation practices are demonstrated and work experiences are provided. (20, 22)

A majority of the readings stated that an abundance and variety of natural resources is desirable for a good program. The literature suggests that a nature center be a representative sample of the natural environment, whatever the local environment may be. This land should be

undeveloped and contain as much plant and animal life of the local area as possible. The American Camping Association recommends that a camp have a varied natural terrain with a variety of land forms. Guides for Girl Scout camps suggest a site with hills, ravines, steep hillsides, level and wooded areas. For outdoor education sites, experts have suggested a rolling topography rather than a very rugged or unusually flat surface. Guidelines for camp sites used by schools in Oregon for outdoor education suggest a site with slopes for education uses -- soil microclimates, distribution of plant and animal life, watershed studies and hills for improved perspective on the environment for astronomy and weather. (17, 20, 23, 25)

Forested areas within the camp are to be considered for their aesthetic value and functional characteristics as related to program content and objectives. The Forest Service states mixed timber types and varieties of plant and animal life as examples of desirable natural resources for outdoor education. Shrublands, including special plantings, hedges, and screen plantings to delimit areas of differing land, brushland areas, and shade trees are included in a checklist of desirable environments for sites used by Oregon schools. The American Camping Association has suggested that camps consider special lands set aside on which plants may be grown and harvested especially for use in campcrafts. (1, 25, 26)

Guides for council camps suggest that a level or open area is needed for living areas and playfields. Open areas, such as lawn or turf for playfields, barelands of planting and eroding soil, rough grass areas and forageland or pioneer annual herbs and perennial species are

0014

recommended as desirable features for sites used by schools in Oregon. These guides further suggest wetlands, such as marshes, shrub swamps, bogs, and water areas such as lakes, ponds, streams or temporary rills. Camp guides for water include clarity and absence of large areas of aquatic vegetation which indicate shallow water and silting. The presence of running water such as brooks, creeks and waterfalls creates particular areas of beauty, coolness, and solitude. (11, 19, 25)

The final concerns are related to health and safety in the camp program and maintenance of the natural areas within the camp. One of the first requirements of the council camp is that it be free of natural hazards. A.A.H.P.E.R. suggest a minimum of natural and man-made hazards on sites used for outdoor education. The Forest Service suggests an area free from hazards such as unprotected cliffs, pits, treacherous water, poisonous plants, poisonous snakes, dangerous snags, dead limbs, quicksands and sink holes. This area is situated far enough away from public thoroughfare to eliminate traffic hazards and all possible efforts are made to eliminate contact with dangerous wild or domestic animals. Julian Saloman points out that swamps and cliffs can be assets as well as nuisances and hazards if their location and size do not detract from the rest of the areas. Camp maintenance suggestions include removing all poisonous and irritating plants from lawns or campus close to buildings and play areas. Standards for council camps recommend that the water areas be examined for fungi, leeches, parasites, snakes and other plant and animal life inimical to man. Water currents which are no greater than two miles per hour with a bottom of firmly packed sand or gravel

slopes, moderately to deep water without drop-offs or holes are suggested recommendations for YMCA camps. (4, 7, 15, 19, 26)

Guides for some camps recommend that some place on or near the site, far enough removed from the buildings and trees, be available as an emergency refuge. A relatively flat, open well-drained area might serve as an overflow parking lot. (19)

Experts have recommended that the camp contain sufficient vegetation to control dust, erosion, and heat and as a protection to wildlife. To encourage wildlife the American Camping Association recommends that ponds be free of choking debris and weeds and that shelter for animals would include tall grass for nesting sites, dense or thorny shrubs, evergreens for winter protection and open trees. The National Audubon Society has recommended that large camp reservations have a wildlife improvement plan. No other factor plays as important a part in the selection of a site as a safe and sufficient water supply, approved and inspected by the State Board of Health. Recommendations for camps, in general, contain statements of this nature. One special caution should be noted. Unless the camp under consideration was planned and built for use over a period of time more than six to eight weeks a year (most summer camps are not) there may well be a problem of water supply and sewage disposal. These problems, being largely underground, are not visible, as others may be. A well-protected watershed typifies the ideal American Camping Association camp. (1, 7, 11, 12, 19, 21, 24, 25, 26)

Proper drainage is essential for satisfactory disposal of wastes. The first requirement for the council camp is land higher than its surroundings for proper drainage. The ideal camp, as cited by the

American Camping Association, has porous soil for wastes to be absorbed in a relatively short time. A sandy loam, porous soil rather than heavy clay would be desirable. (1, 19, 23)

Living Accomodations

Sleeping Facilities. Findings from the literature concerning living quarters include both recommendations and present practices of college-university facilities and public schools. These recommendations for outdoor education include the type, capacity, and facilities within the unit and the heating requirements in relation to grade level, type of group and the program intent.

Findings from the survey of public school systems conclude that the resident sites used by a majority of the public school systems are equipped with sleeping accommodations in the form of cabins or bunkhouses. Sleeping accommodations in the form of tents or tent sites were mentioned by a much smaller number of respondents. A larger percentage of systems with junior-senior high programs have resident sites equipped with tents or tent sites. A greater proportion of systems with junior-senior high programs use sites that provide a genuine experience in outdoor living while elementary or combined programs, by far the largest proportion of systems in the survey, use sites that provide more of the amenities of civilization. (17)

The recommended capacities of each unit are reported in terms of square feet and numbers accommodated. Recommendations for Girl Scout and outdoor resident camps concur that a minimum of 40 square feet of

0017

living space for each bed so arranged that there is a distance of six or more feet between the heads of campers. For YMCA camps, a 30 square feet per person floor area is recommended. In terms of numbers accommodated, experience has shown that individual personality growth and development is best attained in groups of seven to ten. Children living in large groups easily beomce overstimulated and the possibilities for fatigue are greatly increased. Experts in outdoor education suggest a most satisfactory arrangement is the cottage that would accommodate the number of children equivalent to a classroom and at least two adults. Each cottage may be divided into two or more rooms, ideally eight to ten in a single room. It is generally desirable in organized camping to plan for girls and boys to live in separate buildings. Heating should be adequate for the coldest weather in which the building will be used. A.A.H.P.E.R. recommends a unit accommodating 25-30 campers. Guidelines for Oregon resident sites suggest a living area that accommodates a minimum of thirty students with separate buildings or rooms to house eight to ten. (7, 4, 3, 12, 14, 22, 24, 25)

Depending on the comprehensiveness of the program and whether that program is in continuous operation, staff quarters for personnel of widely differing types of expertise may be needed. Professionals recommend in the large outdoor education center two types of staff quarters. Adequate housing for visiting teachers and for resource personnel are these two types. Guidelines for Oregon suggest a separate living quarter for a minimum of 15 supervisoral staff and guests, and living accommodations for counseling staff in a ratio of one staff for each group of eight to ten. Suggested facilities for the school camp living unit are beds, springs, mattresses, storage for clothes and cabinets. Further they might

include racks for shoes, shelves for storage and space for suitcases. Experts have pointed out that most school camp centers should have overnight housing for guests. (24, 25, 7)

Dining Facilities. The typical college-university outdoor education center and resident sites used by a majority of the public school systems are equipped with cooking and dining facilities. Experts claim that it is desirable to provide a building that will care for the dining needs, meetings of the total camp and the program activities that at times must be carried on indoors. Standards for YMCA camps allow twelve to fourteen square feet per camper. Guides for Girl Scout camps suggest that a capacity for the dining hall should be ample to accommodate the total number of persons the camp is eventually designed to serve. For outdoor education, the typical dining hall may accommodate two classes with camp staff during the winter, a total of about eighty people. During the summer, it may need to care for 120. Guidelines for sites used by schools in Oregon suggest a minimum of 150. (6, 7, 8, 10, 12, 19, 24, 25)

Sanitary Facilities. Ratios for toilets and showers is not consistent, depending on the type of camp and whether urinals and gangshowers are used. A ratio of one toilet per eight to ten campers is recommended for school camping in Oregon. In boy's areas with urinals, the ratio is one per fifteen with one urinal for every thirty. A ratio of one toilet for every fifteen is recommended for YMCA camps.

For winter camping, flush toilets and showers should be adjacent to or located within the living quarters. In the St. Louis program, the ratio of campers to showers is ten per one. For Girl Scout camps, guides suggest

a minimum of two private shower booths be provided where group shower facilities are installed. (7, 8, 15, 19, 24, 25)

Guides for Oregon resident camp sites for outdoor education include that the site provide space for laundry and drying rooms. (25)

Infirmary. A number of considerations are necessary to determine the necessity of facilities and capacity of an infirmary for outdoor education. These considerations include the number of participants, time in residence and the distance from the home, school, and hospital. Over one-half of the resident sites used by the public schools are equipped with an infirmary, as is recommended but not absolutely essential by professionals.

Facilities within the infirmary for the outdoor resident camp should include two wards, used in co-ed living. Guides for Girl Scout camps recommend a facility including an isolation ward if the camp is located more than three hours from a hospital. A maximum of one bed for 25 campers is recommended for both the Girl Scout and YMCA camps. The infirmary should be accessible by road and be located to insure isolation and quiet. (3, 7, 11, 15, 19)

Maintenance and Storage

Recommendations for structures for maintenance vary, according to the type and complexity of the center. The nature center should include adequate storage facilities. A maintenance shop and building for the college-university center should include a carpenter shop, storage areas for all building materials, a garage space for trucks, tractors and other vehicles, a staff for greasing, servicing, and maintenance of equipment. (2, 4)

Desirable facilities for an outdoor education resident center include a service area, which provides a building for storage of maintenance equipment, shop and equipment facilitating necessary maintenance and repair needs of the property, facilities and equipment. In the community school camp, one building of sufficient size to house the necessary equipment for operating the camp with an arm for miscellaneous work is desirable. Standards for Girl Scout camps recommend that this building be rodentproof and, if possible, fireproof. An additional open area for numerous materials difficult to store indoors is recommended for all camps. In the St. Louis program, the garage repair shop is located in the central administrative areas. (3, 7, 15, 19)

Administration Area

An administrative area is included in both the typical college-university outdoor education center and in a majority of the sites with resident facilities utilized by the public school systems. Professionals in outdoor education recommend that if the camp is in year-round operation, an administrative unit should be provided. The resident camp site guides for Oregon schools recommend providing for an administrative building space that includes a gathering place for supervisory staff to hold meetings and to use their free time. Recommended facilities for the community school camp office include a lounge, reading, and writing area, space for storage, filing cabinet, toilet facilities for campers, guests and personnel, facilities for staff assembly. Recommendations from the St. Louis program suggest that the location of the central administrative unit should be, as nearly as possible, equidistant

from the various units and convenient to the entrance and service roads. (7, 15, 18, 23)

Indoor Educational Areas

The typical college-university outdoor education center includes a crafts area, a laboratory building and a reference library. A survey of resident sites used by public schools indicates a greater percentage of large than medium or small sized systems use sites that have indoor meeting rooms and a crafts shop. Differences in facilities related to grade level reflect differing interests of younger and older pupils. A much smaller proportion of systems with junior-senior high programs use sites that have a display and exhibit center or a crafts shop than of systems with elementary or combined programs. (18, 17)

Recommendations from the literature have indicated that a facility for indoor and rainy day activities is desirable, whether that building be separate or part of the dining hall. St. Louis program standards allow twenty to twenty-five square feet per camper in a recreation lodge that ideally is arranged so that it can be thrown into one large room or broken into several smaller units. In this program, the library and museum are located in a central administration unit.

Guides for resident sites used by schools in Oregon suggest a site which provides a recreation building that will accommodate a minimum of 150 persons for indoor gatherings and space for library, nature museum and trading post. Guides for the community school camp recommend a capacity of one-fourth of the total capacity for the activity rooms. Experts suggest

program facilities such as a library, study rooms, trading post, and space for science displays should be considered for outdoor education sites, although they are not absolutely essential. A.A.H.P.E.R. recommends the library be located in a separate room. (3. 7, 15, 24, 25)

Outdoor Educational Areas and Facilities

In order to determine outdoor area needs for outdoor education resident sites, program objectives and group type served must be considered. Research of educational programs in camp settings divides programs into two major categories - a curriculum centered program, in which a camp setting is seen as a better place to do with children some of the things they are presently trying to do in a less appropriate setting (mapping, geology, nature hikes) and a problem-centered program which draws from resources of the sites both motivation and materials of instruction. While not ignoring the existing curriculum, the second approach tends more nearly to focus upon the child's nature and needs as more appropriate criteria for determining what should be done. Activities include bridge building, cookouts, and conservation projects. More recent programs favor the curriculum-centered program. Any program will have aspects of both but will be predominately one or the other. An early decision should be made as to which of these types of programs the planners want. (19)

In the public schools which offer programs in outdoor education, a much greater percentage of systems with junior-senior programs used sites that offered a swimming area. The typical college-university center offers canoeing, rowing, and swimming in summer months. (17, 18)

Experts suggest that the site include a campfire ring. Girl Scout recommendations suggest that the ring itself be not larger than 24 to 30 inches in diameter. If an archery or riflery range is located within the camp, it should be located behind a permanent target range. (15, 16, 17, 24)

Guidelines for Oregon resident camp sites suggest a site with good year-round roads leading into the property for delivery of supplies. The Forest Service recommends that roads be all-weather. All roads within the camp should be kept to a minimum with two or more means of egress recommended for council camps. Maintenance recommendations include a well-marked entrance road at least twelve inches with a rock and crushed stone base with a surface of well-rolled screenings or well-paved gravel so that they will be dry. A shoulder rather than a V-ditch and open ground or lawn for at least six feet on each side is recommended for proper drainage and evaporation. (1, 19, 25, 16, 4, 26)

Outdoor Programs. Weather study was found in a substantial majority of programs offered by the public schools. The typical college-university outdoor education center includes a weather station. The mailing box is sometimes located at the end of the dining hall or recreation building or may be a nook in the administration lodge or part of the store. A.A.H.P.E.R. suggests that the observation platform should be located on the highest point of the property. At Camp Cuyamaca, three types of hikes are required; one that gives the most robust children the satisfaction of triumph over hard physical obstacles; one that moves at a leisurely pace over less taxing terrain, and one that is scarcely more than a stroll out from the edge of camp. The typical college-university outdoor education

center contains several miles of hiking and interpretation trails, which begin and end at the interpretation building. The National Audubon Society suggests as essential for any outdoor education facility a well-planned system of nature trails. Length of these trails will depend on the terrain, natural attractions and desired emphasis. Where possible, several trails of various lengths are desirable, each one an extension of a shorter one. (17, 18, 11, 4, 6, 18, 26, 22)

For the community school camp, consider a truck or service car, snow removal equipment, lawn maintenance equipment, suitable fire protection, beach and water equipment, building maintenance equipment and tools. (7)

To determine the subject matter content of programs in the public schools, the NEA survey instrument included a checklist of questions of thirty-nine items representing different subject matter areas, specialities, skills, or activities which might be included. More programs include recreation and physical education than the more specialized sports skills and activities (hunter safety, angling, casting, canoeing). Among the sports activities the general areas of health and physical education are much more heavily represented in elementary and combined programs than in junior-senior high programs. Art and creative writing are the two areas of cultural art activities that are used most frequently in programs. (17)

Indoor Programs. The outdoor education center or camp might include a separate facility to serve as a nature center for exhibits, science displays, zoo, and demonstrations. An exhibit area of this nature exists in the typical college-university center. National Audubon Society suggests for camps that occupy more than 75 acres of land, a nature center, either on a summer or year-round basis is possible and desirable. The typical

college-university center had some provisions, such as ramps and rails but little thought was given to this need. (18, 22, 24)

Summary of the Literature

The sources of information reviewed and reported in this study include texts and reports of research of areas and facilities utilized for programs in outdoor education.

In terms of total acreage, the readings are not consistent. However, a minimum of one acre per camper is recommended by all sources, with additional acreage allowed if the surrounding land is unavailable for use. Sites used most extensively throughout the year include camps used by large public school systems (over 25,000) and college-university centers.

The readings are consistent in reporting the following facilities for sites: A dining facility, suitable for dining and program needs, an infirmary, a maintenance and storage facility, and an administrative building with sufficient space for staff assembly. It can be concluded from the literature that a living unit, accommodating from seven to ten, whether as a separate cabin or a partition in a larger unit, is most appropriate for students in a group living situation. Two sources recommend a separate facility for staff. Sites used more extensively by public schools and colleges include a separate building or buildings for miscellaneous purposes (e.g. crafts, displays, library and nature center).

A variety of natural resources, including a varied topography, forested areas for aesthetic and functional purposes, a level or open meadow for program activities and safety, and a porous soil for proper drainage is

recommended most frequently in the readings. The literature further agrees that this area be free of natural and man-made hazards.

A safe and sanitary water supply, approved and inspected by the State Board of Health, is the first to be considered for any camp.

NOTE: This part was prepared by Miss Gail Lockwood.

PART III

SURVEY OF EXISTING OUTDOOR EDUCATION RESIDENT SITES

In January and February, 1974, three persons from the Department of Recreation and Park Management of the University of Oregon conducted a survey of currently used resident outdoor education sites for the purpose of developing a set of site recommendations for the state of Oregon. It was felt that facts about sites currently used for resident outdoor education programs would give at least an indication of the status quo of outdoor education sites. While it is admitted that developing any site, program, area or facility according to current practices does not assure excellence; one cannot deny the fact that emulating what has been successful is probably far more economical and productive in the long run than attempting a project by trial and error without any regard for current practices.

Accordingly, questionnaires were mailed to 70 directors of resident outdoor education sites identified in Leaders in Outdoor Education. A follow-up was sent to those who had not returned the questionnaire in three weeks. Replies received by February 20 were analyzed. Sixty questionnaires were returned. Four were returned due to incorrect addresses, eleven did not meet the criteria of having resident outdoor education programs and ten gave no response, leaving forty-five or 62.1 per cent to be analyzed.

The survey instrument was divided into five categories: General, Natural Attributes, Indoor Areas/Facilities, Outdoor Areas/Facilities, and Equipment/Supplies. Site was briefly defined as environmental aspects that were "natural" and facilities were briefly defined as environmental

aspects that were "man-made". Category I, "General", sought answers to property ownership, months in use, capacity (participants and staff), and types of groups accommodated. Category II, "Natural Attributes" dealt with the topography, surface water, and significance of the property (aesthetically, scientifically, and historically). Category III, "Indoor Areas/Facilities", was concerned with living quarters for participants, staff and guests, the dining hall, health center, and maintenance. This category was further comprised of questions relating to administration, sanitation, indoor and miscellaneous facilities. Category IV, "Outdoor Areas/Facilities", related to activities and services in the out-of-doors. Category V, "Equipment/Supplies", examined transportation, games and sports, cultural arts, nature activities, and the accommodation of the handicapped.

Category I: General

Analysis of responses in Category I, "General", showed a wide and diverse range of owners of outdoor education sites. Of the 45 camps, ten (22 per cent) were owned by colleges or universities, seven (15 per cent) were owned by private individuals and leased by the schools, four (9 per cent) were owned by identifiable organizations and agencies, four (9 per cent) were owned by churches, three (7 per cent) were owned by cities, three by states, one by a county and all others were leased from unidentified owners. It was established during the study that two colleges owning camps had recently terminated their programs because of financial exigencies.

The acreage range of the 45 camps was from eight to five thousand acres. Sixty-one per cent of the respondents reported their facilities being in

0029

use September through June. The months of April and May showed the greatest use (87 per cent); October showed the second greatest use (85 per cent). December, January, and June showed the least use; however, more than half (61 per cent) reported programs in session during those months.

With 43 respondents reporting, the capacity of the camps ranged from 36 to 300 with a mean capacity for the maximum number of participants being 145. With 34 reporting, the mean capacity for boys was 107.7 and the mean capacity for girls was 107.6 With 38 reporting, the mean capacity for maximum number of staff was 16. With 30 reporting the maximum number of men staff was 5.0 and with 29 reporting the maximum number of women staff was 7.9. The approximate ratio of students to staff is 9:1.

In response to the item on the types of groups accommodated, 92 per cent reported serving the elementary school age; 56 per cent reported serving the junior-high school age; 44 per cent reported serving the senior high school age, and 28 per cent reported serving both the adult age group and combined age groups. Twenty per cent reported serving all five age groups.

Category II: Natural Attributes

Four topography-types and four soil types were listed in the questionnaire. Eighty-five per cent indicated their sites had "hills", 98 per cent checked "forests", 78 per cent checked "meadows", and 51 per cent checked "levels". In responding to the item referring to soil types, 36 per cent checked "sandy" soil, 58 per cent checked "loamy" soil, 73 per cent checked "rocky" soil and 60 per cent checked "clay" soil. It is obvious that all sites were located in areas of varied topography and vegetation.

The ranges for surface water size for ponds and lakes were as follows: 60 per cent of the resident camps included ponds with a size range of one-quarter acre to 2400 acres; 28 per cent of the resident camps included lakes with a size range of two acres to 27 miles; 68 per cent (31) of the resident camps included streams; 24 per cent (11) of the resident camps included rivers; and nine per cent (4) of the resident camps had access to an ocean. It is obvious that there is no consistency in what is termed a lake or a pond and no uniform way of expressing the sizes of bodies of water.

While 60 per cent reported having sites which were free from natural hazards, one inserted two comments indicating that no area was over 100 per cent free from natural hazards. This probably indicates an interest and candidness on the part of this respondent. The item itself had been included in the questionnaire primarily to solicit reactions. It would be interesting to know exactly what thoughts ran through the minds of the 27 who reported no natural hazards and how each defined a natural hazard. As was to be expected, all respondents (100 per cent) reported that their sites had natural appeal and beauty.

Responses to the open-ended questions on natural attributes (Varied and Interesting, Scientifically Significant, and Historically Significant) were, predictably, varied and interesting and are addended in their entirety in Appendices A, B and C. The answers seem to indicate pride and admiration on the part of the respondents as well as an understanding of and an affinity for the land.

0031

Category III: Indoor Areas/Facilities

Sleeping Facilities. Relative to living accommodations, 28 respondents reported having heated cabins with a mean of 8.5 per camp. The average number of students per cabin was 15.7 (21 replies), the average number of staff per cabin was 2.24 (19 replies). One survey reported 17 staff and students collectively. Only 12 respondents reported sites with unheated cabins with a mean of 9.8 cabins per camp. Of the 12 reporting unheated cabins, eight indicated the student capacity with an average of 18.4 students per cabin, and seven indicated a staff capacity with an average of 1.5 staff per cabin. Twenty-seven reported having heated dormitories. The average number of heated dorms per camp was 2.15 with a student capacity of 41 (24 replies), and a staff capacity of five (19 replies). Only four reported having unheated dorms again with an average of two unheated dorms per camp. The average student capacity, as indicated by these four replies, was 36.7 per dorm. Only three of the above four replies indicated staff capacity with an average of 10.3 staff per unheated dorm. Six camps reported having tents with an average of 11.6 tents per camp. One resident camp reported 30 tents not in regular use. Four replies indicated student capacity with an average of 5.1 students per tent; three replies indicated staff capacity with an average of .95 staff per tent. Eighty-two per cent (37 replies) indicated having some type of guest accommodations.

Dining Facilities. The capacity for food service for the dining hall was an average of 150 people (90 per cent replying). The capacity for program was a mean of 160 people (73 per cent replying). Seventy-eight per cent of the dining halls were heated and 80 per cent of the dining halls had fireplaces.

Infirmary. Sixty-six camps had health centers with a mean capacity of six students. The mean distance from the nearest hospital was 12.8 miles (94 per cent replying).

Administrative Facilities. Of the 45 respondents, 94 per cent reported having storage facilities, 76 per cent reported garage facilities, and 85 per cent reported shop facilities.

Of the 45 respondents, 98 per cent reported having a main office, 60 per cent reported having a chef's cabin, 66 per cent reported having a director's cabin, 49 per cent reported having a nurse in residence, and 76 per cent reported having custodial quarters.

Sanitary Facilities. Of the 45 respondents, 82 per cent reported having laundry services, with 42 per cent having services available on the site and 40 per cent having services available off the site. Ninety-two per cent indicated having flush toilets and 15 per cent indicated non-flush toilets. The mean number of flush toilets per site is 16.76 (17) with an approximate ratio of all partipants to flush toilets being 10:1. Ninety-two per cent reported shower heads. There was an average of 15.8 showers with 33 camps reporting. Again, the approximate ratio of all participants to shower heads is 10:1.

Of the 45 respondents 66 per cent indicated having an arts/crafts room, 65 per cent indicated having a library, 54 per cent indicated having a laboratory, 44 per cent indicated having a shop, 46 per cent indicated having a museum, and 44 per cent indicated having a concession facility (store).

Category IV: Outdoor Areas/Facilities

The results for Category IV "Outdoor Areas/Facilities" are listed in the following tables.

Table I

Outdoor Areas in 45 Resident Outdoor Education Sites

Area	Per cent response
Campfire Ring	87%
Cookout/Picnic	87%
Parking	80%
Swimming	58%
Archery Range	49%
Worship	35%
Boating	33%
Rifle Range	24%

Table II

Outdoor Facilities in 45 Resident Outdoor Education Sites

Area	Per cent response
Roads	98%
Hiking Paths	98%
Flag Poles	90%
Weather Station	82%
Mail Drop	76%
Boat House	20%
Observation Platform	13%

Category V: Equipment/Supplies

Buses and automobiles were used almost equally by more than half of the camps. The results for the "separate activities" are listed below.

Table III

Miscellaneous Activities in 45 Resident Outdoor Education Sites

Area	Per cent response
Volleyball	65%
Playing Fields	60%
Softball	58%
Horseshoes	46%
Tetherball	33%
Rope Course	22%
Tennis	15%
Riding	13%
Shuffleboard	5%

There was no way of knowing whether the above facilities were used primarily in the summer or if any were integral parts of any outdoor education program. Thirty per cent indicated having some form of cultural arts and 51 per cent indicated having some form of nature equipment (animal pens/zoo, conservation demonstrations). The opportunity to accommodate the handicapped was 35 per cent - wheelchairs, 35 per cent - blind, 49 per cent - crutches, and 46 per cent - physical limitations.

Discussion of Results: Interpretation

In reviewing the results of the surveys, it is of interest to note that only seven per cent of the 45 resident camps were owned by states and only seven per cent were owned by cities and that 61 per cent function on a ten-month (school calendar) basis. The ratio of student to staff was 9:1. The vast majority of these 45 camps (92 per cent) serve the elementary school age, with 20 per cent serving all five age groups. Realizing obvious topographical differences, 98 per cent are, nevertheless, located in a forested area. All the camps either include or have access to some type of surface water.

The resident camps reported winterized living quarters which were either heated dorms or cabins. The 45 camps are able to accommodate an average of 145 participants. Well over half the camps (66 per cent) have infirmaries with almost half having a nurse in residence and with the mean distance from the hospital being 13 miles. A very large majority of these camps have maintenance services on the site and all but two per cent have a main office on the site.

The ratio of ten participants to one flush toilet head is in conjunction with the American Camping Association Standards. The ratio of participants to shower heads was 10:1 which exceeds that recommended by the American Camping Association. It is not known, however, whether the showers in this survey were all warm water.

Just over half the camps have some type of nature equipment with over half of the camps reported having arts/crafts rooms, libraries, and laboratories. Over three-quarters reported having campfire rings and

cookout areas, also weather stations and hiking paths. These facilities seem indicative of the types of programs; their purposes and objectives.

In sum, this survey of Resident Outdoor Education Camps across the United States (excluding Oregon) is a general index of sites and facilities as questioned by this survey.

0037

PART IV

RECOMMENDATIONS

Based on the review of literature related to recommendations for resident outdoor education sites and the analysis of sites and facilities reported by 45 directors of resident outdoor education sites, the following recommendations are made:

1. The site should be operated 12 months a year, with outdoor education programs being held during each of the months school is in session.

2. The site should accommodate 100 to 200 program participants plus staff.

3. The site should be developed for flexible use by both sexes and all ages from children through older adults.

4. The site should be developed to accommodate those with neuromuscular, orthopedic, congenital and visual handicaps.

5. The site should consist of a minimum of 1.5 acres of program land per person and preferably three acres.

6. The site should be located within a 15 to 20 mile distance from a hospital.

7. The site should have one or more types of water resources for program purposes.

8. The site should consist of a variety of topographical features.

0038

9. The site should contain a wide variety of vegetation.

10. The program areas should be sufficient in size to warrant rotation of use for conservation purposes.

11. The sleeping quarters for participants should consist of winterized quarters with eight participants per room and be grouped for 24 to 32 participants per group.

12. The sleeping facilities should provide storage for boots, coats, clothes and miscellaneous.

13. Toilets should be available at a ratio of one per each ten participants.

14. Hot showers should be provided at a ratio of one per each 20 participants.

15. A heated dining hall should accommodate the maximum number of participants housed on the property.

16. The infirmary should be provided to accommodate three persons per each 100 persons housed on the site.

17. The site should provide the following buildings: administration, a director's residence, caretaker's residence, maintenance, storage, nurse's quarters and guest facilities.

18. The site should have the following: star observatory, trails, flag pole, nature demonstration, campfire ring, library, and crafts areas.

0039

19. There should be laundry facilities on the site for caring for participant's needs, especially for drying clothing worn in the rain.

Most important in development of land is adherence to the ideal that facilities are only a means to an end. If the end is the education of persons for the understanding; use and appreciation of natural and human resources, then it is mandatory that the facilities serve only this end. Selection of a site because of its existing facilities negates realization of the main purpose of the program.

0040

BIBLIOGRAPHY

1. American Camping Association. Conservation of the Campsite. Bradford Woods, Martinsville, Indiana, 1960.

2. Ashbaugh, Bryon L. Planning a Nature Center. National Audubon Society, 1962.

3. Athletic Institute. College and University Guide for Health, Physical Education and Recreation. Washington, D.C., 1968

4. Athletic Institute. Planning Areas and Facilities for Health, Physical Education, and Recreation. Washington D.C., 1966

5. Buechner, Robert D., ed., National Park, Recreation and Open Space Standards. National Park and Recreation Association, 1969.

6. Clarke, James M. Public School Camping. Stanford University Press: Stanford, California, 1951.

7. Department of Public Instruction. Community School Camps, A Guide to Development. Lee M. Thurston, Superintendent, 1951.

8. Donaldson, George. "Planning for Resident Outdoor Education". Taft Campus Occassional Paper, No. VIII, Northern Illinois University, 1972.

9. Donaldson, George, School Camping. New York: Association Press, 1952.

10. Drought, R. Alice. A Camping Manual. New York: A.S. Barnes and Company, 1943.

11. Ford, Phyllis, and Lynn Rodney. Camp Administration. New York: Ronald Press Company, 1971.

12. Hammerman, Donald R., and William R. Hammerman. Outdoor Education, A Book of Readings. Minneapolis, Minnesota: Burgess Publishing Co., 1968.

13. Hulette, Florence M. "A Quantitative and Qualitative Study of Facilities for School Camping and Outdoor Education on State Owned Lands in Illinois". School of Education, University of Oregon, June, 1960.

14. MacMillan, Dorothy Lou. School Camping and Outdoor Education. Dubuque, Iowa: William C. Brown Publishing Company, 1956

15. Manley, Helen, and M.F. Drury. Education Through School Camping. St. Louis: C.V. Mosley Company, 1952.

16. Nathan, Alan A. Maintenance for Camps and Other Outdoor Recreation Facilities. New York: Association Press, 1968.

17. National Education Association, "Environmental Education in the Public Schools". American Association for Health, Physical Education and Recreation, October, 1970.

18. Pick, Diane. "Present Status and Recommendations for the Future", (Report of Research), Journal of Outdoor Education, VII, Spring, 1973.

19. Salomon, Julian Harris. Camp Site Development. New York: Girl Scouts of the U.S.A., 1959.

20. Shomen, Joseph J. A Nature Center for Your Community. National Audubon Society, 1966.

21. Shomen, Joseph J. Wildlife Habitat Improvement. New York: National Audubon Society, 1966.

22. Shomen, Joseph J. Manual of Outdoor Conservation Education. New York: National Audubon Society, 1964.

23. Smith, Julian. Outdoor Education for American Youth. Washington D.C.: American Association of Health, Physical Education, and Recreation, 1957.

24. Smith, Julian W., Reynold E. Carlson, George W. Donaldson, and Hugh B. Masters, Outdoor Education. New Jersey: Prentis Hall, Inc., 1972-73

25. State Department of Education. "Outdoor Education in Oregon Schools", Salem, Oregon 1968.

26. U.S. Department of Agriculture. Teaching Conservation Through Outdoor Education Areas. Washington D.C. July, 1968.

APPENDIX A

Responses to Question 5 (Category II) Natural Attributes of Sites: Varied and Interesting (How)

Survey Number	Responses
1.	Wide range of natural habitats - geology - possible studies
2.	Bogs, marshes, mountains in background
3.	Complete area is located in one large watershed, which contains four different animal habitats.
4.	Varied topography - high bluffs overlooking scenic river valley gullies, ravines, woods.
5.	Six terrestial ecosystems and three marine ecosystems.
6.	Varied in the natural habitats
8.	Mountain, forest, meadow ecology - Montane and Sonoran life zones
9.	Chaparral
11.	National forest. Mother-lode mining area, watershed, easy access to field trips.
12.	Only spot in U.S. that has the Potclam sandstone foundation.
13.	Varied topography, soils, vegetation - scenic
14.	Valley-hills -- adjacent to county and state lands
15.	Chaparral, forest, stream beds.
16.	Relative to northern Illinois, is quite interesting, with rolling glacial topography. Farm operation.
17.	Chaparral
18.	Chaparral
19.	Large number of programs, scenic attractions, activities. Large plant and animal population.

0043

20. Different plant communities

21. More than one predominant nature feature combination of forest, lake, rolling open land.

22. Geologically, geo-morphologically. Wildlife, forest, and historically and setting.

23. Located on the western slopes of the Kittatinny Mountains.

24. Wildflower gardens; many habitats (stream, pond, field, forest)

25. Mariposa Big Tree - 7 miles, Yosemite Valley Floor - 35 miles

26. Chaparral, mixed evergreen forest, Riparian and Aquatic ecosystems within 10 minute walks.

27. Approximately 40 species and sub-species of trees, 12 shrubs, 10 vines, variety of wildlife, water and upland birds.

28. North and South facing slopes. Decomposing granite, Tonto Creek Biology.

29. Lake is largest reclaimed lake in Maine - restocked with salmon and trout.

31. Varied topography and varied natural environment

32. Redwoods - meadows. We also go to tide pools - salt marsh, etc.

33. Pine, fir, oak forest, leather shop on site, rock tumbling, etc. Chuck wagon and pack trips.

35. Limestone caves, cliffs; natural flora and fauna

36. Elevation 800' - 1,000' - Mountain study areas available. Eskers and Kettles, 3 northern bogs

37. One and one-half miles long; mostly undeveloped.

38. Many different types of trees, different elevations, soil types, rock structures

39. Natural gorge, waterfall, mature hardwood forest, pine forest, praire.

40. Ocean Beach marine

41. Extreme variation in topography.

42. Salt water estuary, fresh water pond, ocean, cranberry bog, cedar swamp.

43. We have all states of field to forest succession - located in foothills at Appalachians. Near Pennsylvania escampment. Good variety of Northeast forest types

0045

APPENDIX B

Responses to Question 6 (Category II) Natural Attributes of Sites:

Scientifically Significant (How)

Survey Number	Responses
2.	Forest and wildlife research, aquatic studies
3.	Much of this area is a relatively new forest, other areas are Oak and Hickory, fairly mature.
5.	For teaching ecology
7.	Quartizite outcroppings.
9.	Unique plant community to Southern California
11.	Astronomy, Geology, natural varied flora and fauna
12.	Blackhawk Island
14.	Geology, plants, animals
15.	Geology, chaparral, 4,250' elevation
16.	Marshes, glacial topography, farm animals
17. & 18.	Chaparral area vs. city environment
19.	A true oak opening, park areas are extremely large number of habitats in a relatively small area.
20.	Different plant communities
22.	Varied flora, fauna and wildlife.
23.	Great variety of flora and fauna plus unusual geologies outcroppings.
24.	Wildflower garden contains planted areas of all plants native to State of Connecticut, include rare specimens.
29.	Study area for fisheries on the lake located near White Mountain National Forest Management Area

0046

31. Excellent as an outdoor laboratory and sites for teaching outdoor skills.

33. Geology, biology, archeology

35. Biology - fossils - sedimentary, igneous and meta morphsis rocks

39. Wide variety of wildflowers, geologic outcrops

40. Salt marsh, tidal stream

41. Outcroppings and glacial residue is evident

42. Geology (glacial ponds, kettle holes, moraines, granite glacial deposits)

43. Maple sugar bush.

0047

APPENDIX C

Responses to Question 7 (Category II) Natural Attributes of Sites:

Historically Significant (How)

Survey Number	Responses
2.	Cemetery, homesites, old mill site, iron furnace, charcoal hearths
3.	Site of Indian inhabitance as well as this was formerly the rifle range for Camp Grant during W.W.I and W.W.II
4.	Site of former Eagles Nest, Art Colony, Blackhawk Statue located within 200 yards.
5.	Located San Mateo County - known as cradle of history for Bay region.
7.	Early settlers
8.	Homesteads, Ute Migration route, Cripple Creek Gold Rush
9.	Chumesh Indian sites
11.	Indian Lore, Mother Lode Mining Area
12.	Indian Country
13.	Much of the area once farmed
14.	Near past and present sites
15.	Southern California Mountains, Gold, Old ranches
16.	Old homestead site, old fence lines, cattle lanes, orchards. Early native American camp sites.
17. & 18.	Early California Indians and early settlers
19.	Archaeological digs have unearthed Indian relics dating back to 1000 B.C. - thought to be a major dig area
20.	Lime kiln, old house foundation, nearby cemetery.
21.	Indian sites

0046

22. Old homestead cattle ranch.

23. Few miles from Old Mine Road the oldest highway in North America.

25. Narrow gauge railroad - 5 miles

26. Homestead of the Colby family, dates back to 1893.

27. First outdoor education facility in Texas (1949)

28. Zane Grey cabin - Under Tonto Rim. Indian artifacts; forest service experimental plots, etc.

29. Remains of first farm for the village on the campus. Old town lines which have changed still blazed on this. Serviced by last crank phone service in Maine.

30. Site of first settler in Hancock, N. H.

31. Indian history, previous settlers, etc.

32. Old saw mill

38. Indians first in this area; Forest Service use and protection: site is an original CCC center

39. Traces of mound building Indian tribes, located near Simon Kenton Trace, mineral springs once major attraction as resort area.

41. Area used by Indian tribes, from here to bank of Mississippi

42. Early settlers, Indian evidence, Botanic trail planted by 18th century sea captains.

43. Center is old lumber mill and store complex. Mill is gone but buildings and surrounding area have remains of settlers and Indian use.

44. Local history only

0049

APPENDIX D

S U R V E Y O F O U T D O O R E D U C A T I O N S I T E S

SPONSORED BY UNIVERSITY OF OREGON
DEPARTMENT OF RECREATION AND PARK MANAGEMENT
EUGENE, OREGON

Directions: Check or Complete all answers which apply.

CATEGORY I - GENERAL

1. Person answering:

   Name_____Owner_____Director_____

2. Address:

   _____

3. Name of facility:

   _____

4. Property:

   a) ____owned; b)____leased; c) ____acreage

5. Months in use for outdoor education: (not resident youth camping)

   a) ____ Sept. d) ____Dec. g) ____March j) ____June

   b) ____ Oct. e) ____Jan. h) ____April

   c) ____ Nov. f) ____Feb. i) ____May

6. Capacity:

   a) ____Maximum number of participants

      If Co-Ed: ____Maximum number of boys
      ____Maximum number of girls

   b) ____Maximum number of staff
      ____Men
      ____Women

7. Types of group accommodated:

   a) ____Elementary c) ____Sr. High e) ____Combined

   b) ____Jr. High d) ____Adult

CATEGORY II - NATURAL ATTRIBUTES

1. Type-Topography (Check all that apply)

   a) ____hills(s)

   b) ____forest area(s)

   c) ____meadows(s)

   d) ____levels (plain,valley floor)

   e) soil types(s) (1) ____sandy

   (2) ____loamy

   (3) ____rocky

   (4) ____clay

2. Surface Water

   a) ____pond; ____size c) ____stream e) ____ocean

   b) ____lake; ____size d) ____river

3. ____ free from natural hazards

4. ____ natural beauty and appeal

5. ____ varied and interesting (how):_____

   _____

6. ____ scientifically significant (how):_____

   _____

7. ____ historically significant (how):_____

   _____

CATEGORY III - INDOOR AREAS/FACILITIES

1. Living Quarters

		Student Capacity	Staff Capacity
a) No. cabins heated	____	(1) ____	(2) ____
b) No. cabins unheated	____	(1) ____	(2) ____
c) No. dorms heated	____	(1) ____	(2) ____
d) No. dorms unheated	____	(1) ____	(2) ____
e) No. tents	____	(1) ____	(2) ____
f) Others (list)	____		

2. Guest facilities

   a) ____ cabin b) ____lodge c) ____tent d) ____other; _____

3. Dining Hall

   a) ____capacity for food service c) ____heated

   b) ____capacity for program d) ____fireplace;

4. Health Center

   a) ____capacity; b) ____distance from hospital (nearest mile)

5. Maintenance

   a) ____storage; b) ____garage(s); c) ____service area (shop)

0051

CATEGORY III - INDOOR AREAS/FACILITIES (continued)

6. Administrative
   a) ___main office c) ___director's cabin e) ___custodial
   b) ___chef's living quarters d) ___nurse in health center living qtrs.
   f) ___other _____

7. Sanitary
   a) ___laundry b) ___toilets c) ___showerheads (#)
      1) ___on camp 1) ___flush (#)
      2) ___off camp 2) ___non-flush (#)

8. Miscellaneous
   a) ___pumphouse; b) ___group shelters; c) ___firetower

9. Activities
   a) ___arts/crafts room c) ___laboratory e) ___museum
   b) ___library d) ___shop f) ___concessions (store)

CATEGORY IV-OUTDOOR AREAS/FACILITIES

1. Areas
   a) ___archery range c) ___campfire ring e) ___parking f) ___swimming
   b) ___boating d) ___rifle range f) ___cookout picnic g) ___worship

2. Facilities
   a) ___weather station c) ___observation platform e) ___path(s)(hiking)
   b) ___road(s) d) ___mail drop f) ___flagpole g) ___boathouse

CATEGORY V - EQUIPMENT/SUPPLIES

1. Transportation
   a) ___auto; b) ___bus; c) ___other

2. Separate Activities
   a) Games/Sports
      (1) ___softball (4) ___playing fields (7) ___tetherball (10) ___other
      (2) ___volleyball (5) ___horseshoes (8) ___riding
      (3) ___tennis (6) ___shuffleboard (9) ___rope course
   b) ___Cultural Arts
   c) ___Nature (animal pens/zoo; conservation demonstration)

3. Can your site accommodate the handicapped? (specify)
   a) ___wheelchairs; b) ___blind; c) ___crutches; d) ___physical limitations

Supplementary:

Would you like a copy of the results of this brief summary? ___yes ___no
A copy of your annual operating budget would be appreciated. Please enclose it if possible.

Please use enclosed envelope
to return to: Ms. Gail Lockwood
c/o University of Oregon
Department of Recreation
and Park Management
Eugene, Oregon 97403

1-24-74
RPM 2088

0052

APPENDIX E

LIST OF RESPONDENTS

Ralph W. Adamson
Box 156
Wyoming, Iowa 52362

William J. Avarell
Camp O-Ongo School
Running Springs, CA 92382

Leonard M. Beeman
San Joaquin County Schools Office
Room 407 Court House
222 E. Weber Avenue
Stockton, CA 95202

Paul W. Burton
8782 So. Woodland Road
Novelty, Ohio 44072

James Caslick
Fernow Hall
Cornell University
Ithaca, New York 14850

David J. Davidson
Eastern Iowa Lutheran Bible Camp
Strawberry Point, Iowa 52076

J. Douglas Dickinson
Outdoor Education Center
Antioch College
Yellow Springs, Ohio 45387

William B. Duncan
George Williams College
Williams Bay, Wisconsin 53191

Jerold E. Elliott
202 Recreation Building
University Park, PA 16802

Norman J. Faber
801 County Center III Court
Modesto, CA 95355

Phylis Gandy
Cachuma Church Camp
Star Route
Santa Barbara, CA

Joyce A. Gaus
RD2 Box 270
Branchville, N.J. 07826

Donald Hammerman
Box 299
Oregon, Illinois 61061

Jack H. Heller
Rt. 1, Box 292
Wisconsin Dells, Wis. 53965

James R. Jackson
Rural Route 5, Box 452
Outdoor Education Lab. School
Evergreen, Colorado 80439

J. Bertram Kessel
32 Gaffney Street
Boston, Mass. 02215

John J. Kirk
Montclair State College
New Jersey Sch. of Conservation
Box 272
Branchville, New Jersey 07826

W. L. Kloppe
16 Selma Avenue
Webster Grover, MO 63119

Clifford E. Knapp
Education Center
49 Cottage Place
Ridgewood, N. J. 07451

Ed Kramer
401 Normandy Ridge Rd.
Centerville, Ohio 45459

Bobby L. Little
Rt. 1
Whirehouse, Texas 75791

Dick Lloyd
2555 Mendocino Avenue
Santa Rosa, CA

0053

Kenneth B. Lunney
632 W. 13th Street
Merced, CA 95340

Dave Marple
Board of Education
Frederick, MD

James Mason
13315 Pleasant Valley
Chicago, Illinois 60603

Durrell A. Maughan (2 replies)
3317 Bellevue Avenue
Los Angeles, CA 90026

Robert R. Metz
Metropark Distiict
911 Madison Avenue
Toledo, Ohio 43624

Carl F. Miescke
45 Santa Teresa Street
San Jose, CA 95110

Edward Migdalski
Yale University 402-A
New Haven, Conn. 06520

Stephen D. Olejnik
2685 New Milford School Road
Rockford, Ill. 61109

Fred Partridge
HiHill Star Route
La Canada, CA 91011

Kenneth V. Pike (2 replies)
Rocking K Ranch
447 East Wesleyan Drive

Ronald D. Riggins
Bradford Woods, Route 6
Martinsville, Indiana 46151

Lloyd Rowley
Rt. 4
Randle, WA 98377

Roger A. Sanborn
Colorado Outdoor Education Center
Florissant, Colorado 80816

David J. Silverman
73 White Rock Road
Yarmouthport, Mass. 02675

Waldo E. Stone (2 replies)
Camp Union
Greenfield, N.H. 03047

Lorraine L. Stubbs
Room 213
State Education Building
Augusta, Maine 04330

Beth Wherry
613 Riversville Road
Greenwich, Connecticut 06830

Ernest C. White
Redwood Glen
Loma Mar, CA 94020

Barbara J. Winslow
Los Angeles County Outdoor School
23828 N. Angeles Forest Hwy.
Palmdale, CA 93550

Jack N. Wykoff
Outdoor Education Center
Battle Creek Public Schools
Dowling, Michigan 49050